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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/508,342	09/20/2004	Ichiro Okamoto	56937-120	5679
<div>7590 McDermott Will & Emery 600 13th Street N W Washington, DC 20005-3096</div>			<div>EXAMINER LE, TUAN H</div>	
			<div>ART UNIT 2622</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE 09/25/2007</div>	<div>DELIVERY MODE PAPER</div>

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/508,342

Applicant(s)

OKAMOTO ET AL.

Examiner

Tuan H. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-13 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4, 6-13, 15 and 18-21 is/are allowed.
- 6) ☒ Claim(s) 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

Claim 1 is objected to because of the following informalities:

Claim 1 is not complete because lacking the tenth field data. More specifically, claim 1 should include "reading even field data of the fourth frame as the tenth field data."

Appropriate correction is required.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 16 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Adams et al (6,867,814).

Regarding **claim 16**, Adams et al discloses an imaging system (Adams et al, Figs. 7 and 12) comprising:

an imaging device which picks up an image signal in an image format of 24 frames/second (Adams et al, column 15 lines 28-40, wherein a video system is disclosed);

a temporary recording device (160) which temporarily records the image signal picked up by the imaging device (Adams et al, Fig. 12, wherein buffer is used for temporary storage);

a reading device (inherent part) which reads the image signal from the temporary recording device based upon an interlace system of 60 fields/second

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(Adams et al, Fig. 12 and column 3 lines , wherein video data must be read and transferred to deinterlacer 61);

a pull-down control device (interlacer 61) which is provided with a plurality of corresponding relationships between each frame of the image signal having the image format of 24 frames/second and each field of the interlace image signal having the image format of 60 fields/second, and based upon one corresponding relationship selected from the corresponding relationships, controls the reading operation of the reading device (Adams et al, Fig. 7 and column 6 lines 17-27, wherein progressive source pattern& quality detector 74 detects video sequence and outputs pull-down type); and

a switching device (interlace 61) which switches the corresponding relationships to be selected by the pull-down control device (Adams et al, Fig. 7 and column 6 lines 17-, wherein progressive source pattern& quality detector 74 drives intra-frame deinterlacer in accordance with detected pull-down);

Regarding **claim 17**, Adams et al discloses an imaging system (Adams et al, Figs. 7 and 12) comprising:

an input device to which an image signal having an image format of 24 frames/second is input; (Adams et al, column 15 lines 28-40, wherein a video system produces 24 frames/second data);

a temporary recording device (160) which temporarily records the image signal picked up by the imaging device (Adams et al, Fig. 12, wherein buffer is used for temporary storage);

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a reading device (inherent part) which reads the image signal from the temporary recording device based upon an interlace system of 60 fields/second (Adams et al, Fig. 12 and column 3 lines , wherein video data must be read and transferred to deinterlacer 61);

a pull-down control device (interlacer 61) which is provided with a plurality of corresponding relationships between each frame of the image signal having the image format of 24 frames/second and each field of the interlace image signal having the image format of 60 fields/second, and based upon one corresponding relationship selected from the corresponding relationships, controls the reading operation of the reading device (Adams et al, Fig. 7 and column 6 lines 17-27, wherein progressive source pattern& quality detector 74 detects video sequence and outputs pull-down type); and

a switching device (interlace 61) which switches the corresponding relationships to be selected by the pull-down control device (Adams et al, Fig. 7 and column 6 lines 17-, wherein progressive source pattern& quality detector 74 drives intra-frame deinterlacer in accordance with detected pull-down);

Allowable Subject Matter

Claims 1-4, 6-13, 15, and 18-21 are allowed.

Independent claims 1, 2, 6, 7, 13, 15, 18-21 involve a conversion process between a progressive image format of 24 frames/second and an interlace image format of 60 fields/second by using 2:3:3:2 pull-down system.

Dependent claims 3, 4, 8-12 are branches of claim 1 and 7.

The prior art of record neither anticipates nor renders obvious the 2:3:3:2 pull-down system. The closest prior art (U.S. Pat. 4,641,188) teaches that the 2:3:3:2 pull-down system causes only one frame out of five to be mixed. However, the prior art does not disclose how the 2:3:3:2 pull-down system is carried out.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Suzuki et al (U. S. Pub. 20020101924).

Faroudja et al (U.S. Pat. 6,222,589).

Faroudja (U.S. Pat. 6,111,610).

Swan (U.S. Pat. 6,055,018).

Cismas (U.S. Pat. 5,646,693).

Fujinami et al (U.S. Pat. 5,510,902).

Dorricott et al (U.S. Pat. 5,329,309).

Richards et al (U.S. Pat. 5,191,427).

Lyon et al (U.S. Pat. 4,982,280).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan H. Le whose telephone number is (571) 270-1130. The examiner can normally be reached on M-Th 7:30-5:00 F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The

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fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tuan Le/

A handwritten signature in black ink, appearing to read 'David Ometz', with a stylized, flowing script.

DAVID OMETZ
SUPERVISORY PATENT EXAMINER